**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 and 2 (Cancelled).

3. (Currently Amended) The electron emission element as claimed in claim [[1]] 17, wherein the crystalline thin film that constitutes the cold cathode is any one compound of $LaB_6$, TiC, SiC, and SnC.

4. (Currently Amended) The electron emission element as claimed in claim [[2]] 18, wherein the crystalline thin film that constitutes the cold cathode is any one compound of $LaB_6$, TiC, SiC, and SnC.

5. (Currently Amended) The electron emission element as claimed in claim [[1]] 17, wherein the crystalline thin film that constitutes the cold cathode is any typical nitride of TiN, BN, SrN, ZrN, and HfN.

6. (Currently Amended) The electron emission element as claimed in claim [[2]] 18, wherein the crystalline thin film that constitutes the cold cathode is any typical nitride of TiN, BN, SrN, ZrN, and HfN.

Claims 7-12 (Cancelled).

13. (Currently Amended) The electron emission element as claimed in claim [[11]] 26, wherein the crystalline thin film that constitutes the cold cathode consists of transparent conducting material selected from a group including $In_2O_3$, $SnO_2$, ITO, ZnO, $TiO_2$, $WO_3$, and $CuAlO_2$.

14. (Currently Amended) The electron emission element as claimed in claim [[12]] 27, wherein the crystalline thin film that constitutes the cold cathode consists of transparent conducting material selected from a group including $In_2O_3$, $SnO_2$, ITO, ZnO, $TiO_2$, $WO_3$, and $CuAlO_2$.

Claims 15-16 (Cancelled).

17. (New) An electron emission element comprising:

a substrate forming a base portion;

an insulating layer on said substrate, said insulating layer having an open area at a center portion of said substrate;

a gate consisting of a metal layer provided on the insulating layer and extending in a direction inward of the open area;

a cold cathode comprising a crystalline thin film formed on the open area of the substrate and having a

plurality of fine projection structure parts pointed in substantially the same direction;

wherein said cold cathode comprising a crystalline thin film is adapted to emit electrons when a voltage is applied between the substrate and the gate.

18. (New) An electron emission element comprising:

a substrate forming a base portion;

an insulating layer on said substrate, said insulating layer having an open area at a center portion of said substrate;

a gate consisting of a metal layer provided on the insulating layer and extending in a direction inward of the open area;

an interference layer comprising a conductive film formed on the open area of the substrate;

a cold cathode comprising a crystalline thin film formed on the interference layer and having a plurality of fine projection structure parts pointed in substantially the same direction;

wherein said cold cathode comprising a crystalline thin film is adapted to emit electrons when a voltage is applied between the substrate and the gate.

19. (New) An electron emission element according to claim 18, wherein the film thickness of the crystalline thin film is controlled so that the end of the crystalline thin film is disposed on the same plane position of the gate when the crystalline thin film is formed on the interference layer.

20. (New) An electron emission element according to claim 18, wherein the interference layer is formed of a resistive film.

21. (New) An electron emission element according to claim 18, wherein the interference layer is formed of a conductive film having the same orientation as that of the crystalline thin film.

22. (New) A CRT provided with an electron emission element as an electron source, the electron emission element comprising:

a substrate forming a base portion;

an insulating layer on said substrate, said insulating layer having an opening area at a center portion of said substrate;

a gate consisting of a metal layer provided on the insulating layer and extending in a direction inward of the open area;

a cold cathode comprising a crystalline thin film formed on the open area of the substrate and having a plurality of fine projection structure parts pointed in substantially the same direction;

wherein said crystalline thin film comprises means for emitting electrons when a voltage is applied between the substrate and the gate.

23. (New) A CRT provided with an electron emission element as an electron source, the electron emission element comprising:

a substrate forming a base portion;

an insulating layer on said substrate, said insulating layer having an open area at a center portion of said substrate;

a gate consisting of a metal layer provided on the insulating layer and extending in a direction inward of the open area;

an interference layer comprising of a conductive film formed on the open area of the substrate;

a cold cathode comprising of a crystalline thin film formed on the interference layer and having a plurality of fine projection structure parts pointed in substantially the same direction;

wherein said crystalline thin film comprises means for emitting electrons when a voltage is applied between the substrate and the gate.

24. (New) A flat display provided with an electron emission element as an electron source, the electron emission element comprising:

a substrate forming a base portion;

an insulating layer on said substrate, said insulating layer having an opening area at a center portion of said substrate;

a gate consisting of a metal layer provided on the insulating layer and extending in a direction inward of the open area;

a cold cathode comprising a crystalline thin film formed on the open area of the substrate and having a plurality of fine projection structure parts pointed in substantially the same direction;

wherein said cold cathode comprises means for emitting electrons when a voltage is applied between the substrate and the gate.

25. (New) A flat display provided with an electron emission element as an electron source, the electron emission element comprising:

a substrate forming a base portion;

an insulating layer on said substrate, said insulating layer having an opening area at a center portion of said substrate;

a gate consisting of a metal layer provided on the insulating layer and extending in a direction inward of the open area;

an interference layer comprising a conductive film formed on the open area of the substrate;

a cold cathode comprising of a crystalline thin film formed on the interference layer and having a plurality of fine projection structure parts pointed in substantially the same direction;

wherein said crystalline thin film comprises means for emitting electrons when a voltage is applied between the substrate and the gate.

26. (New) An electron emission element according to claim 17, wherein the substrate is made of a transparent material.

27. (New) An electron emission element according to claim 18, wherein the substrate is made of a transparent material.

28. (New) A flat display according to claim 24, wherein the substrate is made of a transparent material so that the flat display is a transparent type.

29. (New) A flat display according to claim 25, wherein the substrate is made of a transparent material so that the flat display is a transparent type.